

Background

Gestural abilities play a key role in motor learning, communication, and social interaction. Impairments in this domain are frequently observed across neurodevelopmental disorders.

Objectives

This study aimed to evaluate gestural performance in children with Developmental Coordination Disorder (DCD) and Autism Spectrum Disorder (ASD) compared with typically developing (TD) peers.

Methods

Thirty children aged 6–10 years (10 DCD, 10 ASD, 10 TD) were assessed. Gestural performance was evaluated using the Gestures Test (12 meaningful gestures: 6 transitive and 6 intransitive) and the Non-Meaningful Gestures Test (8 finger gestures, 8 hand gestures, and 4 sequences). Motor abilities were assessed using the Movement Assessment Battery for Children–2 (MABC-2) in the clinical groups and the MABC-2 Checklist in TD participants.

Results

Both the DCD and ASD groups showed significantly lower gestural performance than TD children ($p < 0.05$). No major differences emerged between the two clinical groups; however, children with DCD demonstrated relatively preserved abilities in meaningful intransitive gestures (on verbal command) and in the imitation of non-meaningful gestures (hand postures and sequences). In contrast, children with ASD exhibited a positive correlation between meaningful and non-meaningful gestures under imitation conditions, suggesting a specific imitation deficit. No significant correlations were found between general motor and gestural abilities in either clinical group.

Conclusion

Distinct gestural profiles characterize DCD and ASD. Evaluating gestural abilities may contribute to gaining insights for clinical assessment and to targeting specific intervention planning. Further studies on larger and more homogeneous samples are warranted.